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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,715	10/12/2001	David S. Allison	16159.098001;P5944	3306
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OSHA LIANG L.L.P./SUN 1221 MCKINNEY, SUITE 2800 HOUSTON, TX 77010			EXAMINER ZHEN, LI B	
			ART UNIT 2194	PAPER NUMBER

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/977,715

Applicant(s)

ALLISON, DAVID S.

Examiner

Li B. Zhen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER
Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. Claims 23 – 36 are pending in the current application.

Drawings

2. Drawings filed on 13 November 2003 are objected to by the draftsman under 37 CFR 1.84 or 1.152 for the reasons indicated on Form PTO-948 included as an attachment to this paper. Corrected drawings are required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 23 – 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,615,217 to Rosensteel et al. [hereinafter Rosensteel] in view of U.S. Patent No. 6,842,898 to Carlson et al. [hereinafter Carlson].**

5. As to claim 23, Rosensteel teaches the invention substantially including a method for communicating between threads [col. 6, lines 1 – 20], comprising:

invoking a first thread [starts execution of one or more programs 136; col. 5, lines 22 – 39 and col. 7, lines 5 – 21];

associating a first input stream [A first pipe is coupled to `stdin` on each started program 136; col. 5, lines 22 – 39] and a first output stream with the first thread [a

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second pipe is coupled to `stdout` and `stderr` on each such started program 136; col. 5, lines 22 - 39];

invoking a second thread [two programs 130, 136; col. 5, lines 21 – 39];

associating a second input stream [A first pipe is coupled to `stdin` on each started program 136; col. 5, lines 22 – 39] and a second output stream with the second thread [a second pipe is coupled to `stdout` and `stderr` on each such started program 136; col. 5, lines 22 – 39]; and

writing a first data value to the second thread using the first output stream and the second input stream [first program 130 writes bulk record data that is read by the started program 136 via its `stdin` file, and reads bulk record data that has been written by the started program 136 on its `stdout` and `stderr` files; col. 5, lines 22 - 39], wherein at least one selected from the group consisting of the first thread and the second thread manages an operating system process [tasks; col. 7, lines 5 – 21]. Although Rosensteel teaches the invention substantially, Rosensteel does not specifically teach the threads comprise a program counter, a stack, a state, and a register set.

However, Carlson teaches communication between threads [col. 4, line 63 - col. 5, line 5] and the threads comprising a program counter [a thread typically includes a program counter; col. 4, lines 42 – 64], a stack [stack; col. 4, lines 42 – 64], a state [thread can have one of several states; col. 4, lines 42 – 64], and a register set [register set; col. 4, lines 42 – 64].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Carlson and Rosensteel because Carlson's teachings provide a method and apparatus for handling call backs on system events for a collection of related threads [col. 4, lines 42 - 64 of Carlson].

6. . As to claim 24, Rosensteel teaches writing the first data value comprises using an operator associated with at least one selected from the group consisting of the first output stream and the second input stream [col. 52, line 63 – col. 53, line 8].

7. As to claim 25, Rosensteel teaches using the second thread to generate a second data value by performing an operation on the first data value [execute jobs or tasks on a second computer system 112; col. 6, lines 1 – 20]; and reading the second data value from the second thread using the second output stream and the first input stream [provides a result or error code and optionally an error string to the first program 130 upon completing; col. 5, lines 21 – 40].

8. As to claim 26, Rosensteel teaches the second thread is a child thread of the first thread [col. 52, lines 1 – 10].

9. As to claim 27, Rosensteel teaches at least one selected from the group consisting of the first input stream [A first pipe is coupled to `stdin` on each started program 136; col. 5, lines 22 – 39], the first output stream [a second pipe is coupled to `stdout` and `stderr` on each such started program 136; col. 5, lines 22 – 39], the second

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input stream [col. 5, lines 22 – 39], and the second output stream is a standard stream [col. 5, lines 22 – 39].

10. As to claim 28, Rosensteel teaches the standard stream is directly built into a dynamically typed programming language [script 148; col. 5, lines 50 – 63].

11. As to claim 29, Rosensteel teaches associating a first error stream with the first thread [‘stderr’ on each such started program 136; col. 5, lines 22 – 39].

12. As to claims 30 – 36, these are product claims that correspond to method claims 23 – 29; see the rejections to claims 23 – 29 above, which also meet these product claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,148,323 discloses a method for managing execution of system management.

U.S. Patent No. 6,470,346 discloses a system for remote computation.

U.S. Patent No. 6,895,583 discloses a task control block to provide more efficient user task access to task-specific variables and context information.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

CONTACT INFORMATION

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen
Examiner
Art Unit 2194

LBZ


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER